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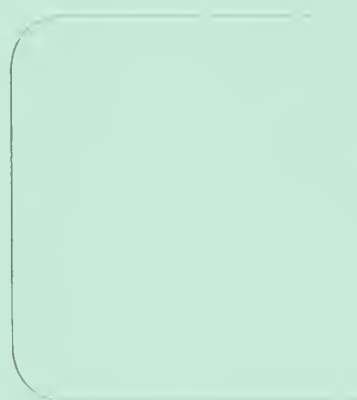
## Faculty Working Papers

THE REAL RATE OF INTEREST:  
A THESIS IN PSEUDOSCIENCE

V Lewis Bassie

#306

**College of Commerce and Business Administration**  
**University of Illinois at Urbana-Champaign**



FACULTY WORKING PAPERS

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March 24, 1976

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Early in this century, Irving Fisher observed the tendency of interest rates to fluctuate with commodity prices. There were many lines of interaction between such key variables as the volume of trade, the money stock, its velocity, commodity prices, the demand for credit, and interest rates. The relationship of interest rates to prices became a focal point in his thinking, and from it he developed the concept of the real rate of interest. At the time there were no national income statistics and no accepted body of doctrine on the nature of income as a counterpart of real production.

Later, during the 1920s, he updated and elaborated his analysis. In the great speculative boom, the prevailing practice in assessing an individual's position was to include changes in his capital position as well as income actually received. Fisher, in his concern with the purchasing power of money, carried this a step further to value the change in capital position in terms of real value. He had seen that the financial markets did not give full effect to the rise in prices and he attributed this to institutional constraints. His book, The Theory of Interest, appeared in 1930.

With the onset of the Great Depression, prices plunged. The deflation was so extreme that the mechanisms of price administration broke down in even the most monopolistic industries. Obviously, there was no advantage in claiming a deficiency of interest on the real rate basis when prices



were declining. The adjustment for the real rate would in some years have been negative, and nobody wanted that. The idea was dropped; it had seemingly died -- though, as events proved, it was merely dormant for a generation. In the meantime, market rates had been driven down to extreme depression lows, and they were kept low through World War II and the late 1940s as a measure of war-time and post-war government finance. The peg was maintained until the Treasury-Federal Reserve Accord of 1951.

In the mid-1950s the situation was ripe for the monetarist counter-revolution started by Milton Friedman. He summarized his position in the statement "money does matter," and nobody quarrels with this today. The success of monetarism depended on the resumption of inflation, for which it proposed to afford a solution.<sup>1</sup> Friedman revived the real rate of interest as one of the helpful tenets of his new quantity theory of money and attempted to use the concept as a means of bridging the gap in that short-cut theory by supplying a connection to demonstrate how income and output were among its derivatives.<sup>2</sup> In this, the real rate of interest served at best lamely but it was accepted as a part of the theory and was assumed to share whatever validity the whole might have. The popularity of this idea was limited until the Vietnam War broke the price stability of the early 1960s. It then gained strength, and in the 1970s, support in the financial

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<sup>1</sup>Harry G. Johnson, "The Keynesian Revolution and the Monetarist Counter-Revolution," Richard T. Ely Lecture, December 1970, American Economic Review, May, 1971.

<sup>2</sup>"A Monetary Theory of Nominal Income," Journal of Political Economy, March-April, 1971.





community widened. The concept developed the promise of having an effective payoff for lenders as the inflation persisted through two recessions.

Many among the growing numbers who came to believe in the permanence of inflation felt that the market rate of interest should be free to match the real rate and this resulted in various moves toward higher interest charges. In the double-digit inflation and sharp recession in late 1974, the institutional restraints on interest rates were mostly lifted or inactivated; revelation of the threat of illiquidity and bad debt produced fears of a financial crisis. One way to recover liquidity is to raise prices for higher earnings, and this was done in many lines of business, so that profits could be made at operating rates well below capacity.

Housing in particular suffered severely from high interest rates in competitive investment outlets as well as from high mortgage rates and other cost increases, and was further depressed by diversions of funds in the drive for liquidity. The disorganization of the housing market led to proposals for restimulation through indexing in the form of variable rates of interest. Some declared these to be necessary for recovery. They could point to the fact that such practices had already been put into effect in some developing countries, notably Brazil, where improving the take for the mortgage lender was said to be a stimulus to building and a source of economic progress. Under the authoritarian regimes in such countries, the complex of measures imposed, aided by enforced political stability and a prosperous outside world, could appear for a time to be wholly successful.



What the real rate of interest is supposed to provide is a basic rate of interest return to capital and in addition an increase in the amount of that capital sufficient to maintain its real value in relation to the prices of goods and services in general. In other words, the rate of interest charged the borrower should be made up of two parts: a basic rate of return plus an increment to the principal equivalent to the rate of inflation in the economy. In the United States, the basic short-term rate of return should probably be low, say about 3 percent, because the resources available for expansion are large, but most advocates of indexing would propose something like twice this figure. The inflation premium would, of course, be determined by the "inevitable" upward movement of prices, since any possibility of the reverse is ignored. Some even hold that this portion of the return to the lender should be nontaxable. There are several points of view from which this concept may be considered.

#### As Response to Inflationary Conditions

First, the money and capital markets are not unresponsive to the conditions that bring on inflation. During the past decade interest rates rose much faster than prices in general. The prime rate almost doubled from  $4\frac{1}{2}$  percent in 1964 to  $8\frac{1}{2}$  percent in 1969. There was a setback in the recession of 1970 and the rate was kept low through the election of 1972, but by the summer of 1974 the rate rose to an unprecedented high of 12 percent, or almost three times the level during the period of relative price stability of the early 1960s. These gains of nearly 100 and 200 percent represent a





degree of inflation for the price of money far outrunning the general price inflation of about 20 and then 50 percent. Even so, they are often explained away on the grounds that the "real" rate had not gone up at all.

Price and interest rate fluctuations were long regarded as cyclically correlated, but the old pattern has been broken. Since 1969 prices have continued to rise through two recessions. The price competition that was supposed to develop with idle capacity and manpower did not become effective. The dominance of business concerns with power to set prices for profit even when volume was reduced led to an acceleration of the inflation. In the recession of 1974-75, the most severe since the 1930s, interest rates held high; short-term rates fell back from their peaks but were still at historically high levels, and long-term rates held near their peaks.

Like business concerns in general, the banks were seeking liquidity by way of obtaining maximum earnings, and they were encouraged in this venture by the three bank-regulatory agencies, the same agencies that earlier had competed with each other in giving them opportunities to get overextended. The recession produced a surge of conscience in the banking system, resulting in such a concentration on quality of loans that many business concerns, even rather large ones, could not obtain funds. Recovery was not promoted by these policies. The federal budget was forced to bear the burden alone.

It has become common in discussions of inflation to downgrade increases in money income as nominal or illusory. The implication is that it is appropriate to go beyond the usual definition of income in transaction



terms to the real values underlying them. Thus, it may be concluded that the real rate of interest is a 'true' measure, and that the lender is entitled to a higher rate of return than the market would set. This special consideration for loan funds would seem to make them more sacred than the dollars in which they are denominated. Lenders, who are often borrowers too, generally have no desire to preserve real values on their own liabilities, such as bank deposits. In contrast, the holders of the latter might regard their claims to have equal justification for protection against loss of value. However, if all holders of money claims were provided enough more each year to restore their real values, there would be no end to inflation. So nobody proposes to extend the special status claimed for loan funds to the working balances or other fixed dollar assets held by business and consumers.

The main reason cited in support of the real rate is that it is supposed to represent a more equitable relation between lender and borrower in periods of rising prices. No doubt the averages work that way, especially over long periods, but the proposition that everybody can make money on borrowed funds in a period of inflation is fallacious. Ask the investor who bought stocks on margin in January 1973 and was sold out a few months later. Or the consumer who borrowed in mid-1974 only to lose his job and his car shortly. The businessman who is hard pressed by rising costs and competition is put under even greater pressure when he must pay twice as much on borrowed funds. The volume of distress borrowing has been heavy,





and to none of these borrowers is the case for favoring the lenders with higher "real" rates valid.

It seems strange that some strong supporters of free markets are not willing to let the money market determine the rates payable. Milton Friedman recently stated that US savings bonds are the 'greatest rip-off in modern history," and recommends that the government add a cost of living index factor to the cash-in value at maturity. This recommendation to improve the buyer's take at public expense shifts to a new and different principle. Evidently a market is there, with new sales running about \$7 billion a year for a net increase in the total outstanding of about \$4 billion. True, patriotism supports it, but to that extent it fits the pattern of stratified markets in the private sector.

Any indexing scheme has some effect toward increasing the flow of funds chasing goods, and this adds to inflationary pressures. In the special case of indexing interest rates, it would in addition increase benefits to the owners of wealth, the group best able to take care of itself. Since this group is leading, not lagging, in the inflation, the degree of inequity would widen. It is a downgrading of economics as a science to present indexing for the real rate of interest as either a source of equity or a satisfactory policy for living with inflation.

#### As Investment Goal

Another way of looking at the real rate of interest is as a statement of an investment goal. As such, it replaces the old maxim, safety of



principal, with a new one, safety of purchasing power. Anybody is free to choose any goal he may wish, of course, but achieving that goal in practice is the real problem. The desire for freedom from risk -- in this case a transfer to the borrower of risk on the value of principal -- can hardly be satisfied. One investor may lose 15 percent in a year of stable prices; another may hold even, but have the value of his capital reduced by 15 percent inflation. It may be regrettable that anybody should lose on an investment, in either way, but nobody who invests should expect to be guaranteed a specific profit either in dollars or in purchasing power.

It is sometimes said that if rates do not produce a real return, potential lenders will withhold their funds. In that case, the rest of us should say, "Good! The help of hoarding in holding down inflation is appreciated!" Unfortunately, it is not a realistic point. The owner of liquid capital can easily figure out that he will wind up better off by accepting the market rate, no matter how high the rate of inflation, than by just holding cash. Any interest received at least partly offsets the loss in real value.

In any case, there is no compulsion on anybody else to consider an investor's goal realistic or to incur unnecessary costs in supporting his accumulation. On the contrary, if it is at public expense, those who are not directly involved should resist proposals that would enact such special advantages through official action. The whole history of subsidies, direct or through tax loopholes, tells how they wind up as charges against taxpayers, some special community group, or consumers in general.<sup>3</sup> Frequently

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<sup>3</sup>V Lewis Bassie, "Subsidies," International Encyclopedia of the Social Sciences, Vol. 15, p. 363.



these measures were imposed for the benefit of influential groups who gained command over the political powers that could enforce their claims against the opposition of others who considered their interests unfairly affected. If the channels of communication are restricted against the latter, as in the less developed countries, opposition may appear to be negligible.

Where indexing of mortgages has been adopted, it is usually assumed that inequities have occurred because of differences in indebtedness and ownership of property. If the principal of the debt is periodically raised with the index, the borrower constantly finds he owes more than he did at the start, and this rising debt is presumably justified by increases in the value of the property. On this basis, the indexing is essentially a method of transferring the windfall gains that accumulate during inflation from the active investor, the primary risk-taker, to the lender. Thus, it consolidates the position of the financier-saver, maintaining the inequality of wealth, and restricts the growth of the middle classes upon which future prosperity and the development of democracy depend. It is precisely this kind of maneuvering for advantage in which the sorry meaning of inflation lies. There is nothing in scientific economics to explain or justify such developments.

If the government should index its own obligations, the beneficiaries would have more money to spend or lend. If it could also be induced to forego taxes on the portions of interest euphemistically called maintenance of capital, the benefits would be extended into the sphere of tax subsidies, and again the expanded flow of funds would be feeding the fires of inflation.





In either case, the government would have to search for other sources of revenue. As the taxing power became strained, deficit financing would aggravate the problem. Deficits and inflation would build upon and perpetuate each other. It is a situation in which the ostensible opponents of inflation, the recipients of the added funds, would gain additional incentives for using inflation and "fiscal irresponsibility" to their own relative advantage.

Nevertheless, the possibility of a downturn some time or other is not so insignificant that no mention need be made of what would be done in future periods of deflation. Suppose prices should decline and indexing works both ways. Then the government would collect from the man with money in the bank, and interest received by the bond holder would go to the government to compensate for the higher "real" value of his claim. Would the banker whose loans commanded a higher "real" value be prepared to sacrifice current earnings on this account, even though deposits and assets of the bank were falling, or would he perhaps insist that there had to be some minimum below which the rate of interest he charged could not fall? If it is not possible to tax unrealized gains in a prosperous situation, how could anyone expect people to pay taxes on unrealized "real" gains during hard times? Clearly, the rules for indexing would have to be changed. The real rate of interest describes a one-way street.

#### As Apologia for High Interest Rates

A third look at the real rate of interest sees it as an apologia for high market rates of interest. In this role it is used to justify high



interest charges by the banks and other lenders and it distorts management of money and credit by the Federal Reserve Board. The Fed is willing to accept high interest rates today because it fears the potential restimulation of inflation, and this possibility might become even worse should it be necessary to bail out many private banks with high powered money. So the Fed hopes that natural sources of recovery will bring a resumption of industrial investment.

The lending institutions constantly advocate a strong fight against inflation through tight money, a condition which they identify with high interest rates. These are the prices of their own product, so what they want is the restriction of other prices, using their own high returns as the main instrument of restriction. Although the talk is anti-inflation, what the banks are actually selling is credit. The more credit they sell, the greater the spur to inflation. So they are indirectly selling inflation and some special effects of an inflation that is ostensibly unwanted provide a sales pitch for putting it across. With other financial institutions they advertise a philosophy of buy now because it will cost more later, and borrow to buy now because loans can be repaid later in cheaper dollars.

At the same time the banks can deny that the inflation brings them any "real" profit. The failure to gain the real rate of interest is only one part of the explanation for this. The other argument appeals to rising costs; they have to pay interest on CDs and other time deposits, and when these rates soar, it appears that very little is being made on the marginal loan. In considering this argument we are perhaps supposed to forget that



every textbook in economic principles has a chapter on monopoly in which it is pointed out that profits are maximized at the point where marginal revenue is equal to marginal cost. Moreover, the costs which set the pace, that is, the rates paid on time deposits, are within the banking sphere of operations and can be influenced as the bankers desire. If higher costs mean higher profits, by all means put them up. On the real rate thesis, there is no profit anyway.

The setting of interest rates, like the setting of prices in general, has become increasingly a matter of price administration. Each industry finds it desirable to have a rationale for price increases and banking is no exception. A few big banks set the pattern, and most banks follow the lead in conforming to the prime rate they agree upon. The prime rate is a standard known to all as the basis for proper charging, not unlike the rule of Pittsburgh Plus which used to be followed in steel, so even banks outside the centers of finance can hold to the same virtually noncompetitive rate structure. Thus they can say to a customer, "We have to charge the prime rate plus 3 percentage points for loans on receivables." Or something similar. Significantly in the great upsurge of 1974, the prime rate took the lead from the volatile rates on federal funds and commercial paper in moving up to the extreme 12 percent peak, and on the subsequent decline it lagged substantially.

Citicorp apparently had wanted to avoid the monopolistic implications of all this and adopted a formula which related its prime rate with a short lag to the rate on commercial paper. However, in the spring of 1975, during the sharp decline from the peak, Citicorp set aside its formula in order to





avoid breaking the prime rate below the 7.50 percent which the rest of the banks considered appropriate. Then, in two stages, it modified its formula to meet industry standards; first it raised the differential of the prime rate over commercial paper to 1.25 percentage points in April, and then to 1.5 percentage points early in the new year.

In the recession, the number of banks on the "watch lists" of the regulatory agencies rose very sharply. Bank profits plunged, part of the drop being due to large set-asides for reserves against bad debt. The REITs (Real Estate Investment Trusts) typically could not keep up the payments due on the funds they had borrowed, and the banks are often carrying them today without receiving interest due because it is a way to help salvage their own positions. The same holds true for some other loans which will be bad debt if the borrowers are called for payment. For the year 1975 as a whole, the rate of inflation was about 7 percent, roughly the same as the 6.75 percent prime rate being charged at year end. In the view of many financial analysts, however thinly based that view may be in scientific analysis, the prime rate was barely adequate to maintain the real value of capital and did not produce any real net income at all.

#### Confusion of Income and Capital Values

Here we encounter the basic technical difficulty with the real rate of interest. The concept confuses the definition of income by introducing an intangible change in the value of capital. In a money economy, income typically arises from transactions in which goods or services are exchanged for cash. The income to the seller is the difference between the price he



receives and the outlays he had to incur in making the sale possible. From a welfare standpoint the income he receives may or may not be adequate to buy the things he needs or desires, and it may or may not be as adequate this year as it was last year. If he is below a poverty standard, social justice may require that he be given assistance via government transfer payments. None of that changes the basic measure of the income received.

In this kind of comparison, it is important to keep the definition of income separate from the definition of unrealized changes in wealth. Wealth is the value of assets owned at a given point of time, measured in dollars at that time. Index numbers may be used to convert to dollar values of another time even though such alternative values are inaccessible. From the welfare standpoint again, the individual may consider himself better or worse off as the real value of his holdings has changed. This depends upon his success in making investments with a good payoff as well as upon changes in the general economic situation. But his current consumption is not necessarily affected.

Since inflation lowers the real value of the dollar and dollar-denominated debt instruments, concern is expressed that the liquid capital available for investment will be unduly curtailed. Actually, the accumulated wealth in the economy has grown tremendously. The presumed inequity in letting inflation reduce its real value per unit takes no account of this growth. In every year of the 1970s private liquid asset holdings advanced and in every year except 1973 they moved up faster than current dollar gross national product. Since the volume of money and credit has far outstripped the growth



of real product, the threat to real investment which is supposed to derive from putting asset holdings on a constant dollar basis is purely imaginary.

It is always possible to find or create financing for anything the economy is able to produce. The effort to convert liquid capital into real capital would under ordinary circumstances be at the heart of the inflation problem. The situation that developed in the recent recession brought other considerations heavily to bear on decisions to raise prices, and it was the scramble to regain liquidity that drove interest rates to their peaks.

A complete evaluation of the capital position of the lenders, therefore, should take account of the volume of credit issued as well as its value per unit. As a group, they have suffered no real deterioration, and to the extent that inflation has reduced the value of their holdings, it is in accordance with public policy in the fight against inflation. The only way to halt inflation is to keep somebody from having everything he wants. The owners of wealth are a small proportion of the total population, though with a lot of weight in money terms, and it is not inappropriate to let some kind of restriction begin there.

With the real rate of interest, the question of equity moves into consideration of such capital positions. Inevitably this brings into play competing claims of one holder as against those of another and numerous pleas for equal treatment. The details of potential claims against existing and expected capital are innumerable and the problems of valuation insuperable. It is no more than an assumption by the real raters that the holder of wealth is entitled to have its real value maintained. What they are proposing is a new set of entitlements that is unrelated to the specific





costs of doing business with any particular borrower, who may or may not be able to profit from the loan. Many loans are made to home buyers or consumers engaging in some personal project that will produce no money return at all. The proposal is not one in support of the current or traditional market system, but is destructive of it in opening the door to intangible attachments to ordinary business practice.

Indexing to assure the real value of capital is not the same as indexing to reimburse social security recipients who have been hurt by inflation, or even as indexing wages in general. Keeping the current income of the latter groups in line with rising prices does not increase their command over available goods and gives them none of the benefits of increasing productivity. To say that indexing for one group requires indexing for all is just another way to confuse the issue. The decision to keep the current position of low-income groups from deteriorating in no way justifies increases for those who have gained. Furthermore, the real rate of interest does not index on the same basis as current income. If prices rise 10 percent, the indexing of 6 percent interest income would put it up to 6.6 percent, not 16 percent as the real rate would specify. The latter widens the scope of adjustments for the owners of wealth in such a way as to aggravate the inflation control problem.

In the national income accounts, the definition of income is attached to current production. In tax policy, it is attached to questions of personal gain and equity between individuals. Capital gains are taxed, though inadequately, but these also conform to the transactions basis for measuring



income. Unrealized gains are not taxed and there is no point in compensating unrealized purchasing power losses either in higher prices or in tax allowances.

As for the indexing proposals, the government is in no position to compensate for declines in the real value of wealth. There are simply no practical means of doing so, though many methods could be dreamed up by those hoping to pay less. The only way an income tax can be administered effectively is in terms of some firm definition of income. Departing from this would open the door to <sup>50</sup>~~40~~ many new forms of avoidance, figure-juggling, and lobbying that the whole structure of the tax system would be undermined. Even on the definition of income as gains realized through actual transactions, the tax system is already overburdened with loopholes.

When the government tries to sustain aggregate demand in a recession, the progressive tax system forces it to incur deficits. To the extent that those who are able to set prices or interest rates as they please can profit from the compensatory fiscal policy, the deficits are quickly absorbed into their surpluses. As Treasury Secretary Simon puts it, "They nationalize their losses." The expenditures undertaken to promote recovery are immobilized, and the pressure of inflation on personal income restricts consumption and lowers the basis for capacity expansion. The result is a stalemate that can be relieved only by a departure into instability on one side or the other.

The country can ill afford the growth of instability, the losses of revenue, and the increases in inequality that this pseudo-scientific



concept of the real rate of interest would introduce. It has no essential use in economic analysis, adding nothing to correlations that would not be provided by the price measure alone. Like inflation itself, it is a means of obtaining special advantages and is of no help in reducing frictions among social groups. Any economist who has casually endorsed the idea should rethink his position.

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April 3, 1976

















